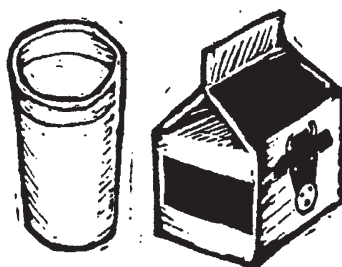


Calcium

What Is Calcium?

Calcium is a mineral found primarily in dairy products and in dark green, leafy vegetables. The human body needs calcium to build and maintain strong bones and teeth. Calcium also plays a role in the proper functioning of the heart, muscles, and nerves, and in maintaining blood flow.



dairy desserts) per day. The same study also showed that only 45% of all African-American adolescents surveyed reported drinking or eating three or more servings of calcium-rich foods.

Inadequate calcium intake in childhood and adolescence results in low bone density, which in turn can lead to stunted growth, increased risk for bone fractures, and osteoporosis in later years. Osteoporosis is a condition of gradually weakened and brittle bones.

What Are the Consequences of Calcium Deficiency.?

Adolescence is a critical time for optimal calcium intake because bones grow and incorporate calcium most rapidly during the adolescent years. The peak time for building bone mass is approximately during ages 12 to 14. By age 17, approximately 90% of the adult bone mass has been established. Relatively little calcium is added to bones after age 21.

Unfortunately, most adolescents do not meet their dietary calcium requirements. A recent survey in California showed that only 47% of girls aged 16-17 drank or ate three or more servings of calcium rich foods (milk, cheese, yogurt,

How Much Calcium Is Enough?

For individuals 9 to 18 years of age, the optimal dietary calcium intake is 1,300 milligrams per day. Four or more servings of milk or other calcium-rich foods would meet this recommendation. Adolescents who avoid dairy

July 2000

Section 3

Inside this Section

1 What is Calcium?

What Are the Consequences of Calcium Deficiency?

How Much Calcium is Enough?

2 What are good sources of calcium?

What is Lactose Intolerance?

What About Calcium Supplements?

3 Additional Screening Interventions/Referrals Follow-Up

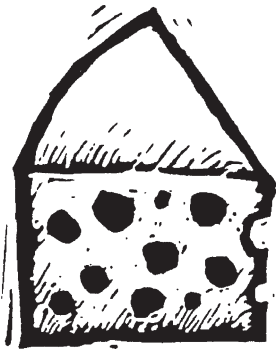
4 “How Much Calcium Am I Getting?” Activity Sheet

5 “Action Plan for Calcium” Activity Sheet

CALCIUM

products because they are concerned over calories and weight gain can choose low-fat or fat-free (nonfat) dairy products.

One of the barriers to adequate adolescent calcium intake is the consumption of soft drinks. As the amount of soft drinks consumed by adolescents has increased, the amount of milk that they drink has decreased. A 12-oz serving of nonfat milk has fewer calories than a 12-oz soft drink, and provides one-third of an adolescent's daily calcium needs, as well as many other important nutrients.



What Are Good Sources of Calcium?

Dairy products such as milk, yogurt and cheese are excellent sources of calcium. Plant sources of calcium include broccoli, sunflower seeds, nuts, legumes, some greens (kale, collards, mustard), okra, rutabaga, bok choy, dried figs, and tortillas (made from lime processed corn). Fortified sources

Additional Screening

Screen for lactose intolerance by asking the following questions:

- Does drinking milk upset your stomach?
- Do you have gas, bloating, or diarrhea after drinking or eating any dairy products?
- Can you eat foods cooked with milk without any problems?

Use the "How Much Calcium Am I Getting?" activity sheet to help your client determine how much calcium she is getting from food and/ or supplements.

You can use the food replicas to help with portion sizes.

of calcium are also available. Calcium-fortified orange juice, soy beverages, rice beverages, and cereal are also great sources of calcium.

What Is Lactose Intolerance?

Some individuals produce too little lactase, an enzyme the body uses to break down lactose (the sugar in milk). When lactose is not digested, it cannot be absorbed by the body. As it moves through the intestine, it can cause such uncomfortable symptoms as nausea, cramping, gas, bloating, abdominal pain, and diarrhea.

The amount of lactose that can be tolerated without side effects varies by individual. The type of dairy product consumed also makes a difference. Most individuals with lactose intolerance can have small amounts of dairy products throughout the day, especially when taken with other foods.

Before eliminating all dairy products from their diet, individuals should experiment with variety and serving sizes. In addition, they can try milk products that have the enzyme lactase added. One example is Lactaid (& brand milk. Lactase is also available as drops that can be added to milk or pills that the individual can take prior to drinking or eating dairy products. Dairy alternatives such as soy milk and rice milk are also available. However, not all dairy alternative are fortified with calcium and vitamin D. It is important to check the food label for these necessary nutrients.

"Lactose intolerance" is an inability to digest lactose; it is not an allergy. A milk allergy is the body's reaction to the protein in milk; individuals with a milk allergy need to avoid all dairy products and any foods containing them - even in very small amounts. Infants and young children diagnosed by a physician with a milk allergy usually outgrow it by age 4.

What About Calcium Supplements?

Calcium supplements can be used to provide part, or all, of the daily requirement. However, adolescents are not usually interested in taking supplements for long-term prevention of disease. However, they may be willing to include more calcium-rich foods and beverages in their diet.

Calcium supplements should not be taken at the same time as an iron supplement or a multi-vitamin/ mineral supplement that contains iron.

Adolescents with severe lactose intolerance — who are unwilling to use lactose-reduced milk — may need to rely on a supplement in addition to non-dairy sources of calcium to meet their calcium requirement.

Interventions/ Referrals

Use the “How Much Calcium Am I Getting?” activity sheet to teach which foods are good sources of calcium, including the lesser known non-dairy sources.

Use the “Action Plan for Calcium” activity sheet to assist the client to develop her action plan for the behavior changes she is willing to make to achieve the recommendation optimal calcium intake.

Follow-Up

Review the action plan with the client to determine if she achieved her goal(s) for behavior change.

If the client did not make any changes...

... Explore what barriers prevented her from doing so and discuss possible strategies for removing these barriers.

If the client made changes but still falls short of the recommended intake...

... Revise action plan with client to change or add goals for behavior change.

If the client has made changes and achieved the recommended intake...

... Help the client develop a new action plan for maintaining the new behavior.



How Much Calcium Am I Getting

Calcium Sources	Serving Size	Calcium Contents (mg)	My Serving Size	My Calcium Intake (mg)
DAIRY:				
Milk, all types	8 oz (1 cup	300		
Skim milk powder	11/4 cup	400		
Cheese, hard, aged	1 oz	~200		
Cheese, processed	1 oz	150		
Cottage cheese	1 cup	140		
Ricotta cheese	1/2 cup	335		
Yogurt, low-fat, nonfat	8 oz	415		
Yogurt with fruit, low-fat	8 oz	315		
Yogurt, frozen	1 cup	200		
Ice cream, ice milk	1 cup	150		
Milkshake	8 oz	300		
Pudding or custard	1 cup	150		
NON-DAIRY:				
100% fruit (with calcium)	1 cup	350		
Citrus/fruit punch with calcium	1 cup	300		
Tofu, firm	1/2 cup	260		
Broccoli	1 cup	240		
Sardines	3 oz	325		
Salmon, canned	3 oz	180		
Almonds	1/4 cup	100		
Greens (turnip, beet, collards)	1 cup	150		
Okra	1 cup	150		
Dry Beans, cooked, canned	1 cup	100		
Tortilla, corn	1 - 7"	45		
SUPPLEMENTS:				
Vitamin/mineral pill		~100-200		
Antacid, such as TUMS®		200		
			Total =	

Recommended daily intake = 1300 mg
My total daily intake of calcium = _____ mg
How much more calcium do I need? _____ mg

ACTION PLAN for CALCIUM

Name: _____ Date: _____

Check the boxes that describe what you are presently doing and what you plan to do:

	AM DOING	PLAN TO DO
Include a calcium-rich food or beverage with every meal.	<input type="checkbox"/>	<input type="checkbox"/>
Choose a calcium-rich food or beverage for a snack every day.	<input type="checkbox"/>	<input type="checkbox"/>
Substitute milk for water in hot cereal, soups, pancake mix, and other recipes.	<input type="checkbox"/>	<input type="checkbox"/>
Drink less soda. I will reduce my soda Intake by _____ (cans, bottles, Glasses) per day	<input type="checkbox"/>	<input type="checkbox"/>
Along with eating calcium-rich foods, I will take a vitamin/mineral supplement _____ times per week.	<input type="checkbox"/>	<input type="checkbox"/>
Drink all the milk that I put on my cold cereal.	<input type="checkbox"/>	<input type="checkbox"/>
My ideas for improving my calcium intake:	<input type="checkbox"/>	<input type="checkbox"/>

Signature: _____ Date: _____
(optional)

